

REMARKS

Claims 1-18 are pending in the application. Claims 1-6 stand rejected, and claims 7-18 have been withdrawn from consideration. By the present amendment, claim 5 has been amended, and claim 19 has been added to further define the invention. The Examiner's reconsideration of the rejection in view of the above amendments and the following remarks is respectfully requested.

Objections:

The Title of the Invention has been amended as suggested by the Examiner. Therefore, withdrawal of the objection is respectfully requested.

Claim Rejections- 35 U.S.C. § 112, second paragraph:

Claim 5 is rejected under 35 U.S.C. § 112, second paragraph, for the reasons set forth on page 3 of the Office Action, that claim 5, line 3, the term limitation "thickness less" is indefinite.

Claim 5 has been amended for purposes of clarification. Applicants respectfully submit that claim 5 satisfies the requirements of 35 U.S.C. § 112, second paragraph. Withdrawal of the claim rejection is respectfully requested.

Claim Rejections- 35 U.S.C. § 102(e):

Claims 1, 3, 4, & 6 are rejected under 35 U.S.C. § 102(e) as being anticipated Chu et al. (U.S. 6,290,631).

To anticipate a claim, the reference must teach every element of the claim (see, e.g., MPEP 2131). It is respectfully submitted that at the very minimum, claim 1 is believed to patentable over and not anticipated by Chu because Chu does not teach or suggest, *inter alia*, *blocking the first metal from filling the at least one trench in the alignment mark region to*

maintain the at least one trench in the alignment mark region in an unfilled state, as essentially claimed in claim 1.

Chu discloses a method for recovering the alignment mark on a substrate to the top of the dielectric layer. Examiner contends that Chu discloses blocking the first metal from filling the at least one trench in the alignment mark region to maintain at least one trench in the alignment mark region in an unfilled state (Figures 3B and 3C; Col. 3, line 44, - Col. 4, line 34). Applicants respectfully disagree with Examiner's interpretation of Chu.

Chu discloses an alignment mark (306) that is completely filled with an inter-layer dielectric (ILD), and then a trench (316) is formed above the alignment mark (306) and trench (316) is completely filled with a capping layer (318) (Col. 3, line 44, - Col. 4, line 34; Figures 3B and 3C). Indeed, the method disclosed in Chu renders it impossible for maintaining at least one trench in the alignment region in an unfilled state because Chu discloses that the alignment mark (306) is completely filled with an ILD and trench (316) is filled with a capping layer. Thus, Applicants respectfully submit that Chu does not suggest or disclose a method for providing contrast alignment comprising the step of, *inter alia, blocking the first metal from filling the at least one trench in the alignment mark region to maintain the at least one trench in the alignment mark region in an unfilled state, as essentially claimed in claim 1.* Therefore, claim 1 is patentably distinct and patentable over Chu.

Claims 3, 4, and 6 depend, directly or indirectly, from claim 1. As such, these claims are believed to be patentable over Chu for at least the same reasons as given above for claim 1.

Claim Rejections- 35 U.S.C. § 103(a):

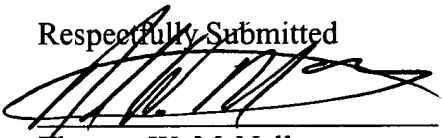
Claims 2 & 5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Chu et al. (U.S. 6,290,631) in view of Mancini et al. (U.S. 6,083,806). Applicants respectfully disagree.

Although Mancini may disclose forming of grain (seed) on silicon substrate for alignment marks, at the very least, Mancini does not disclose or suggest a method for providing contrast alignment comprising the step of, *inter alia*, *blocking the first metal from filling the at least one trench in the alignment mark region to maintain the at least one trench in the alignment mark region in an unfilled state*, as essentially claimed in claim 1.

Thus, Mancini fails to cure the deficiencies of Chu. Since claims 2 and 5 depend from claim 1, the dependent claims include the elements of independent claim 1. Therefore, the dependent claims 2 and 5 are allowable for at least the same reasons as given for claim 1. Accordingly, the withdrawal of the claim rejections under 35 U.S.C. § 103(a) is respectfully requested.

In view of the foregoing remarks and amendments, it is respectfully submitted that all the claims now pending in the application are in condition for allowance. Early and favorable consideration of the case respectfully requested.

Respectfully Submitted


By: Thomas W. McNally
Reg. No. 48,609
Attorney for Applicants

F.CHAU & ASSOCIATES, LLP
1900 Hempstead Turnpike, Suite 501
East Meadow, New York 11554
Telephone: (516) 357-0091
Facsimile: (516) 357-0092